NPort 5100A Series
Quick Installation Guide

Second Edition, June 2010

1. Overview

NPort 5100A series device servers are compact, palm-sized data communication devices that allow you to control RS-232 (NPort 5110A), RS-422/485 (NPort 5130A), and RS-232/422/485 (NPort 5150A) serial devices over a TCP/IP-based Ethernet.

Note: "-T" indicates an extended temperature model.

2. Package Checklist

Before installing the NPort 5100A series device server, verify that the package contains the following items:

- 1 NPort 5100A serial device server
- Power Adaptor (NPort 5100A-T doesn't include this accessory)
- 4 stick-on pads
- Document & Software CD
- Quick Installation Guide
- Product Warranty Statement

Optional Accessory

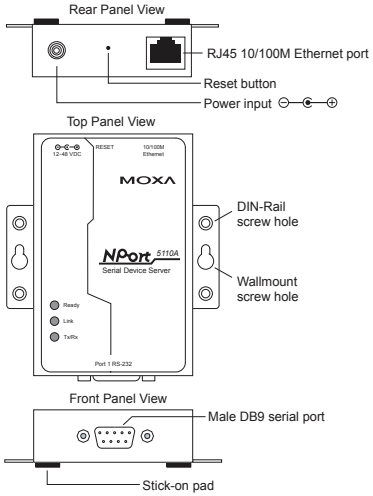
- DK-35A: DIN-Rail Mounting Kit (35 mm)

Notify your sales representative if any of the above items are missing or damaged.

3. Hardware Introduction

As shown in the following figures, NPort 5100A series device servers have one male DB9 port for transmitting RS-232 (NPort 5110A), RS-422/485 (NPort 5130A), or RS-232/422/485 (NPort 5150A) serial data.

P/N: 1802051000021



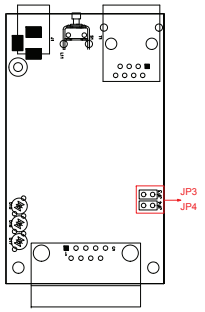
NOTE: The NPort 5110A, NPort 5130A, and NPort 5150A have the same form factor.

Reset Button—*Press and hold the Reset button for 5 seconds to load factory defaults*: Use a pointed object, such as a straightened paper clip or toothpick, to depress the reset button. This will cause the Ready LED to blink on and off. The factory defaults will be loaded once the Ready LED stops blinking (after about 5 seconds). At this point, release the reset button.

LED Indicators—NPort 5100A's top panel has three LED indicators, which are described in the following table.

LED Name	LED Color	LED Function
Ready	Red	Steady on: Power is on and the NPort is booting up.
		Blinking: Indicates an IP conflict, or DHCP or BOOTP server is not responding properly.
	Green	Steady on: Power is on and the NPort is functioning normally.
		Blinking: The NPort has been located by the NPort Administrator's Location function.
	Off	Power is off, or a power error..
Link	Orange	10 Mbps Ethernet connection.
	Green	100 Mbps Ethernet connection.
	Off	Ethernet cable is disconnected.
Tx/Rx	Orange	Serial port is receiving data.
	Green	Serial port is transmitting data.
	Off	No data is being transmitted or received through the serial port.

Adjustable pull high/low resistor for RS-422/485 (150 KΩ or 1 KΩ)



Jumpers are used to set the pull high/low resistor values. The default is 150 KΩ. Short the jumpers to set this value to 1 KΩ. Do not use the 1 KΩ setting with RS-232 mode, since doing so will degrade the RS-232 signals and shorten the communication distance.

4. Hardware Installation Information

STEP 1: After removing the NPort 5100A series device server from the box, the first thing you should do is connect the power adaptor.

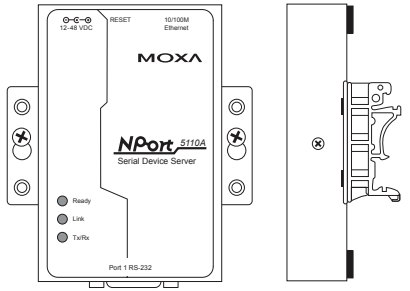
STEP 2: Connect the NPort 5100A series device server to a network. Use a standard straight-through Ethernet cable to connect to a hub or switch. When setting up or testing the NPort 5100A series device server, you might find it convenient to connect directly to your computer's Ethernet port. In which case, use a cross-over Ethernet cable.

STEP 3: Connect the NPort 5100A series device server's serial port to a serial device.

STEP 4: Placement options.

In addition to placing the NPort 5100A on a desktop or other horizontal surface, you may also make use of the DIN-Rail or Wall Mount options, as illustrated below.

Wall Mount **DIN-Rail**



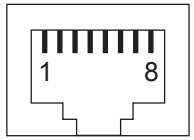
5. Software Installation Information

To install **NPort Administration Suite**, insert the **NPort Document & Software CD** into your computer's CD-ROM drive. Once the **NPort Installation CD** window opens, click on the **Installation** button, and then follow the instructions on the screen.

To view detailed information about **NPort Administration Suite**, click on the **Documents** button, and then select "NPort 5100A Series User's Guide" to open the pdf version of the user's guide.

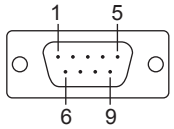
6. Pin Assignments

Ethernet Port Pinouts



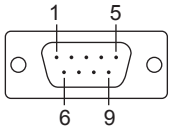
Pin Number	Ethernet
1	Tx+
2	Tx-
3	Rx+
6	Rx-

NPort 5110A—DB9 male (RS-232) port pinouts



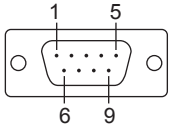
Pin Number	RS-232
1	DCD
2	RxD
3	TxD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	---

NPort 5130A—DB9 male (RS-422/485) port pinouts



Pin Number	RS-422/485 (4W)	RS-485 (2W)
1	TXD-(A)	---
2	TXD+(B)	---
3	RXD+(B)	Data+(B)
4	RXD-(A)	Data-(A)
5	GND	GND
6	---	---
7	---	---
8	---	---
9	---	---

NPort 5150A—DB9 male (RS-232/422/485) port pinouts



Pin Number	RS-232	RS-422/485 (4W)	RS-485 (2W)
1	DCD	TXD-(A)	---
2	RxD	TXD+(B)	---
3	TxD	RXD+(B)	Data+(B)
4	DTR	RXD-(A)	Data-(A)
5	GND	GND	GND
6	DSR	---	---
7	RTS	---	---
8	CTS	---	---
9	---	---	---

7. Specifications

Power Requirements

Power Input	12 to 48 VDC
Power Consumption	NPort 5110A: 82.5 mA@12V, 47.3 mA@24V
	NPort 5130A: 89.1 mA@12V, 49.5 mA@24V
	NPort 5150A: 92.4 mA@12V, 52.8 mA@24V

Operating Temperature	0 to 60°C (32 to 140°F), for standard models -40 to 75°C (-40 to 167°F), for -T models
Operating Humidity	5 to 95% RH
Dimensions	75.2 × 80 × 22 mm (2.96 × 3.15 × 0.87 in) ←with ears 52 × 80 × 22 mm (2.05 × 3.15 × 0.89 in) ←without ears
Serial Line Protection	15 KV ESD for serial port Level 1 Surge, EN61000-4-5
Magnetic Isolation	1.5 KV for Ethernet
Power Line Protection	Level 2 Burst (EFT), EN61000-4-4 Level 3 Surge, EN61000-4-5
Regulatory Approvals	FCC Class A, CE Class A, UL, LVD

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